

Appl. No. 10/829,324  
Reply Filed: August 8, 2007  
Reply to Final Office Action of: February 8, 2007

#### AMENDMENTS TO THE CLAIMS

Claims 10, 22-29, 39, 51-58, 68 and 80-87, of which claims 10, 22, 39, 51, 68 and 80 are independent, are currently pending in the application. This listing of claims replaces all previous versions and listings of claims:

- 1-9. Cancelled.
10. (Currently Amended) A method for processing video data to produce an effect to occur at a future time, comprising:  
implementing an application thread, an upload thread, a decoding thread, a render thread, and a presenter thread;  
passing the video data to the application thread for creating the effect to be added to the video data, generating pre-decompressed video data from the video data, and determining parameters which describe the effect;  
passing the pre-decompressed video data to the upload thread for uploading the pre-decompressed video data into video hardware;  
passing the pre-decompressed video data to the decoding thread for decoding the pre-decompressed video data to produce decoded video data;  
passing the decoded video data to the render thread rendering the effect in the decoded video data to produce output video data;  
passing the output video data to the presenter thread to present the output video data;  
wherein the application thread performs:  
reading a sample of the video data; allocating a sample object for the sample; partially decoding the sample to produce the pre-decompressed video data; and transferring the sample object to the upload thread  
wherein the upload thread performs:  
obtaining a video memory surface; issuing a first snooping command; and uploading the pre-decompressed video data into the video memory surface  
wherein the decoder thread performs:

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issuing a second snooping command; obtaining a new video memory surface;  
determining a status of the new video memory surface; performing the decoding  
to produce the decoded video data in the new video memory surface; and  
attaching the new video memory surface to the sample object

wherein the application thread further performs:

determining, in the application, effect parameters for the effect; and passing the  
effect parameters from the application to the render thread;

The method according to claim 9,

wherein the output sample object is a proxy.

11-21. Cancelled.

22. (Currently Amended) A method for processing video data to produce an effect to occur  
at a future time, comprising the steps of:

receiving the video data;

creating the effect; generating pre-decompressed video data from the video data;  
uploading the pre-decompressed video data into video hardware;

decoding the pre-decompressed video data to produce decoded video data;

determining parameters which describe the effect;

rendering the effect in the decoded video data to produce output video data;

presenting the output video data; and

releasing resources utilized in decoding and rendering;

wherein the steps of creating the effect, generating pre-decompressed video, and  
determining parameters are performed by an application;

wherein the steps of uploading the pre-decompressed video, decoding the pre-  
decompressed video data, rendering the effect, and releasing resources are performed by  
a 3D-Server; and

The method according to claim 17,

wherein generating pre-decompressed video data from the video data comprises:  
reading a sample of the video data; allocating a sample object for the sample; partially

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decoding the sample to produce the pre-decompressed video data; and transferring the sample object to the 3D-Server.

23. (Original) The method according to claim 22, wherein uploading the pre-decompressed video data into video hardware comprises: obtaining a video memory surface; issuing a first snooping command; and uploading the pre-decompressed video data into the video memory surface.
24. (Original) The method according to claim 23, wherein the pre-decompressed video data is uploaded into the video memory surface using a Bus Mastering process.
25. (Original) The method according to claim 23, wherein decoding the pre-decompressed video data to produce decoded video data comprises:
  - issuing a second snooping command; obtaining a new video memory surface;
  - determining a status of the new video memory surface;
  - performing the decoding to produce the decoded video data in the new video memory surface; and
  - attaching the new video memory surface to the sample object.
26. (Original) The method according to claim 25, further comprising: determining, in the application, parameters for the effect; passing the effect parameters from the application to the 3D-Server; and receiving, in the application, an output sample object.
27. (Original) The method according to claim 26, wherein the output sample object is a proxy.
28. (Original) The method according to claim 26, wherein rendering the effect in the decoded video data to produce output video data comprises: assigning a target memory surface to the output sample object; rendering the effect; and storing the rendered effect in the target memory surface.

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29. (Original) The method according to claim 28, wherein outputting the output video data comprises:

placing the output sample object in a presenter queue; and performing a presenter method to present the output sample object as the output video data.

30-38. Cancelled.

39. (Currently Amended) A system for processing video data to produce an effect to occur at a future time, comprising:

means for implementing an application thread for creating the effect to be added to the video data, generating pre-decompressed video data from the video data, and determining parameters which describe the effect;

means for implementing an upload thread for uploading the pre-decompressed video data into video hardware;

means for implementing a decoding thread for decoding the pre-decompressed video data to produce decoded video data;

means for implementing a render thread rendering the effect in the decoded video data to produce output video data; and

means for implementing a presenter thread presenting the output video data;

wherein the means for implementing the application thread comprises: means for reading a sample of the video data; means for allocating a sample object for the sample; means for partially decoding the sample to produce the pre-decompressed video data; and means for transferring the sample object to the upload thread;

wherein the means for implementing the upload thread comprises: means for obtaining a video memory surface; means for issuing a first snooping command; and means for uploading the pre-decompressed video data into the video memory surface;

wherein the means for implementing the decoder thread comprises: means for issuing a second snooping command; means for obtaining a new video memory surface; means for determining a status of the new video memory surface; means for performing the decoding to produce the decoded video data in the new video memory surface; and means for attaching the new video memory surface to the sample object;

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wherin the means for implementing the application thread further comprises:  
means for determining, in the application, effect parameters for the effect; means for  
passing the effect parameters from the application to the render thread; and  
The system according to claim 38,  
wherein the output sample object is a proxy.

## 40-50. (Cancel)

51. (Currently Amended) A system for processing video data to produce an effect to occur at  
a future time, comprising: means for receiving the video data; means for creating the  
effect; means for generating pre-decompressed video data from the video data; means for  
uploading the pre-decompressed video data into video hardware; means for decoding the  
pre-decompressed video data to produce decoded video data; means for determining  
parameters which describe the effect; means for rendering the effect in the decoded video  
data to produce output video data; means for presenting the output video data; and means  
for releasing resources utilized in decoding and rendering;  
wherein the means for creating the effect, means for generating pre-decompressed  
video, and means for determining parameters are an application;  
wherein the means for uploading the pre-decompressed video, means for  
decoding the pre-decompressed video data, means for rendering the effect, and means for  
releasing resources are a 3D-Server; and  
The system according to claim 46,  
wherein the means for generating pre-decompressed video data from the video  
data comprises: means for reading a sample of the video data; means for allocating a  
sample object for the sample; means for partially decoding the sample to produce the pre-  
decompressed video data; and means for transferring the sample object to the 3D-Server.
52. (Original) The system according to claim 51, wherein the means for uploading the pre-decompressed video data into video hardware comprises: means for obtaining a video memory surface; means for issuing a first snooping command; and means for uploading the pre-decompressed video data into the video memory surface.

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53. (Original) The system according to claim 52, wherein the pre-decompressed video data is uploaded into the video memory surface using a Bus Mastering process.
54. (Original) The system according to claim 52, wherein the means for decoding the pre-decompressed video data to produce decoded video data comprises: means for issuing a second snooping command; means for obtaining a new video memory surface; means for determining a status of the new video memory surface; means for performing the decoding to produce the decoded video data in the new video memory surface; and means for attaching the new video memory surface to the sample object.
55. (Original) The system according to claim 54, further comprising: means for determining, in the application, parameters for the effect; means for passing the effect parameters from the application to the 3D-Server; and means for receiving, in the application, an output sample object.
56. (Original) The system according to claim 55, wherein the output sample object is a proxy.
57. (Original) The system according to claim 55, wherein the means for rendering the effect in the decoded video data to produce output video data comprises: means for assigning a target memory surface to the output sample object; means for rendering the effect; and means for storing the rendered effect in the target memory surface.
58. (Original) The system according to claim 57, wherein the means for outputting the output video data comprises: means for placing the output sample object in a presenter queue; and means for performing a presenter method to present the output sample object as the output video data.
- 59-67. (Cancel)

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68. (Currently Amended) A computer readable medium including instructions for causing a computer system to execute a method for processing video data to produce an effect to occur at a future time, comprising: implementing an application thread for creating the effect to be added to the video data, generating pre-decompressed video data from the video data, and determining parameters which describe the effect; implementing an upload thread for uploading the pre-decompressed video data into video hardware; implementing a decoding thread for decoding the pre-decompressed video data to produce decoded video data; implementing a render thread rendering the effect in the decoded video data to produce output video data; and implementing a presenter thread presenting the output video data;

wherein implementing the application thread comprises: reading a sample of the video data; allocating a sample object for the sample; partially decoding the sample to produce the pre-decompressed video data; and transferring the sample object to the upload thread;

wherein implementing the upload thread comprises: obtaining a video memory surface; issuing a first snooping command; and uploading the pre-decompressed video data into the video memory surface;

wherein implementing the decoder thread comprises: issuing a second snooping command; obtaining a new video memory surface; determining a status of the new video memory surface; performing the decoding to produce the decoded video data in the new video memory surface; and attaching the new video memory surface to the sample object;

wherein implementing the application thread further comprises: determining, in the application, effect parameters for the effect; passing the effect parameters from the application to the render thread; and

The computer readable medium according to claim 67, wherein the output sample object is a proxy.

69-79. (Cancel)

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80. (Currently Amended) A computer readable medium including instructions for causing a computer system to execute a method for processing video data to produce an effect to occur at a future time, comprising the steps of: receiving the video data; creating the effect; generating pre-decompressed video data from the video data; uploading the pre-decompressed video data into video hardware; decoding the pre-decompressed video data to produce decoded video data; determining parameters which describe the effect; rendering the effect in the decoded video data to produce output video data; presenting the output video data; and releasing resources utilized in decoding and rendering;  
wherein the steps of creating the effect, generating pre-decompressed video, and determining parameters are performed by an application;  
wherein the steps of uploading the pre-decompressed video, decoding the pre-decompressed video data, rendering the effect, and releasing resources are performed by a 3D-Server; and  
The computer readable medium according to claim 75,  
wherein generating pre-decompressed video data from the video data comprises: reading a sample of the video data; allocating a sample object for the sample; partially decoding the sample to produce the pre-decompressed video data; and transferring the sample object to the 3D-Server.
81. (Original) The computer readable medium according to claim 80, wherein uploading the pre-decompressed video data into video hardware comprises: obtaining a video memory surface; issuing a first snooping command; and uploading the pre-decompressed video data into the video memory surface.
82. (Original) The computer readable medium according to claim 81, wherein the pre-decompressed video data is uploaded into the video memory surface using a Bus Mastering process.
83. (Original) The computer readable medium according to claim 81, wherein decoding the pre-decompressed video data to produce decoded video data comprises: issuing a second snooping command; obtaining a new video memory surface; determining a status of the

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new video memory surface; performing the decoding to produce the decoded video data in the new video memory surface; and attaching the new video memory surface to the sample object.

84. (Original) The computer readable medium according to claim 83, further comprising: determining, in the application, parameters for the effect; passing the effect parameters from the application to the 3D-Server; and receiving, in the application, an output sample object.
85. (Original) The computer readable medium according to claim 84, wherein the output sample object is a proxy.
86. (Original) The computer readable medium according to claim 84, wherein rendering the effect in the decoded video data to produce output video data comprises: assigning a target memory surface to the output sample object; rendering the effect; and storing the rendered effect in the target memory surface.
87. (Original) The computer readable medium according to claim 86, wherein outputting the output video data comprises: placing the output sample object in a presenter queue; and performing a presenter method to present the output sample object as the output video data.